

Product Name: ZX114ER5-xxPH Samtec ERM5 Edge Rate rugged Breakout Adapter

Product Description: ZX114ER5-xxPH is Samtec ERM5 connector breakout adapter. It is collection of 8 modules. ZX114ER5-xxPH is designed for real-time electrical test and measurements, signal integrity , characterization, manufacturing loopback test applications.

ZX114ER5-xxPH is commonly used throughout this document. It is referred to the ZX114ER5-xxPH module where the “xx” will be one of the ERM5 connector series as listed in the *Ordering Information* section

ZX114ER5-xxPH features:

- 1- Provides access to all Samtec ERM5 signals via onboard standard 0.1" pitch headers.
- 2- Listed number adjacent to each header pin represent the associated Samtec ERM5 connector pin number.
- 3- All traces are 50 Ohms impedance controlled with exceptional signal integrity & crosstalk.
- 4- Four layers PCB design, inner layers are GND planes.
- 5- Dedicated GND reference test points, interfacing with two inner GND planes.
- 6- **Mates** with any height and formfactor Samtec ERF5 edge rate rugged high speed connector formfactor.
- 7- Ease of interface with single channel and differential scope probes.
- 8- Flying lead wire assembly may be used for board to board interface – See ordering information

Electrical: Insertion loss > -2dB @3GHz
 Trace impedance: 50 Ω
 Operating Temperature: -55°C to +125°C
 Samtec Connector:
 Onboard Connector: ERM5-xxx 2rows per xx , where xx is 10 .. 75 pins/row
 Mates with: Any Samtec ERF5 formfactor
 Pitch: 0.020" (0.50mm) pin to pin pitch
 Plating: 10μ" (0.25μm)
 Header:
 Pitch: 0.1" (2.54mm) pin to pin pitch
 Pin: Square 0.025" (0.635mm)
 Height: 0.24" (6mm)
 Plating: Gold Flash

Application: Bringup, testing, emulation, development, modular design evaluations, manufacturing loopback

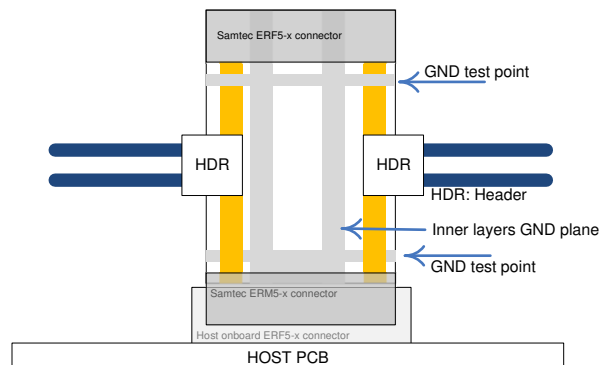
Mates with : Any height and formfactor Samtec ERF5 edge rate connector series.
 Mates with ERF5 connector series :
 1- Latching , -L
 2- Extended Guide Post Shield, -EGPS.
 3- Extended Guide Post, -EGP.
 4- Extended Guide Post Shield, -DSS.
 5- ERCD and ERDP micro and twinax cable assembly

Breakout Access : All ZX114ER5-xxPH breakout adapters provide access to ALL Samtec ERM5 connector via onboard header.



ZX100ACC-SS
Flying leads wire assembly

ZX114ER5-x simplified cross section diagram

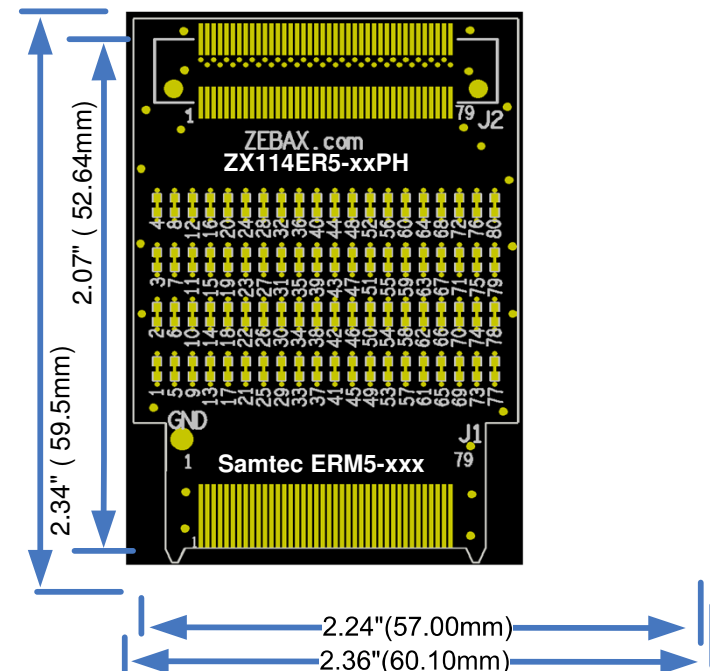


Note:
 Signal layers
 Ground layers, Please note – The GND test point is connector to:
 1- Top/Bottom GND fill
 2- The inner layers ground planes

Compliance:

ISO2001 certified
 RoHs - Lead Free
 EU RoHS2
 UL E111594 document
 ELV- Vehicle Directive (Directive 2000/EC)
 European Union Directive (203/11/EC)
 Halogen Free per IEC-61249-2.21 : 2003
 RoHs Directive 2011/65/EU
 WEEE Directive (2012/12/EU)

Certificate of Compliance for Radioactive substances
 Certificate of Compliance for Asbestos
 Certificate of Compliance for Ozone Depleting Substances, ODS
 Certificate REACH SVHC
 Certificate of Compliance RoHS_EN_CoC



PLEASE NOTE – Pictures on document are placeholders along with dimensions. This document will be updated in 10 days.

Ordering Information:

Part number	Mates with	Description
ZX114ER5-10PH	ERM5-010 ERF5-010	2 rows x 10 pins/row breakout adapter
ZX114ER5-20PH	ERM5-020 ERF5-020	2 rows x 20 pins/row breakout adapter
ZX114ER5-30PH	ERM5-030 ERF5-030	2 rows x 30 pins/row breakout adapter
ZX114ER5-40PH	ERM5-040 ERF5-040	2 rows x 40 pins/row breakout adapter
ZX114ER5-50PH	ERM5-050 ERF5-050	2 rows x 50 pins/row breakout adapter
ZX114ER5-60PH	ERM5-060 ERF5-060	2 rows x 60 pins/row breakout adapter
ZX114ER5-70PH	ERM5-070 ERF5-070	2 rows x 70 pins/row breakout adapter
ZX114ER5-75PH	ERM5-075 ERF5-075	2 rows x 75 pins/row breakout adapter

ZX100ACC-SS Flying leads wire assembly

ZX100ACC-SS site page for ordering additional flying leads wire assembly

Note
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SPECIFIED DIMENSIONS ARE INCHES (MM). ROHS COMPLIANT	ASSEMBLY DRAWING ITEM: ZX114ER5-xxPH	
DESCRIPTION: Samtec Edge Rate rugged high speed connector Breakout Adapter		REVISION: 1.0 SHEET: 1 OF 7
CHECKED: M. MARINA	DRAWN: MATTHEW	

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Product Name: ZX114ER5-xxPH Samtec ERM5 Edge Rate rugged Breakout Adapter

Signal Access : All ERM5 connector signals are accessible via onboard headers.

Ground : ZX114ER5-xxPH is 4 layers PCB design where the inner layers are Ground layers. They are connected to the GND test point as well as top & bottom GND fills. For improved signal integrity, please connect the GND test point to system GND reference point. See Cross Section diagram for details.

ZX114ER5-xxPH part numbers : ZX114ER5-xxPH is offered in 8 different models, supporting each ERM5 connector size. Below are each part number with associated mechanical diagram.

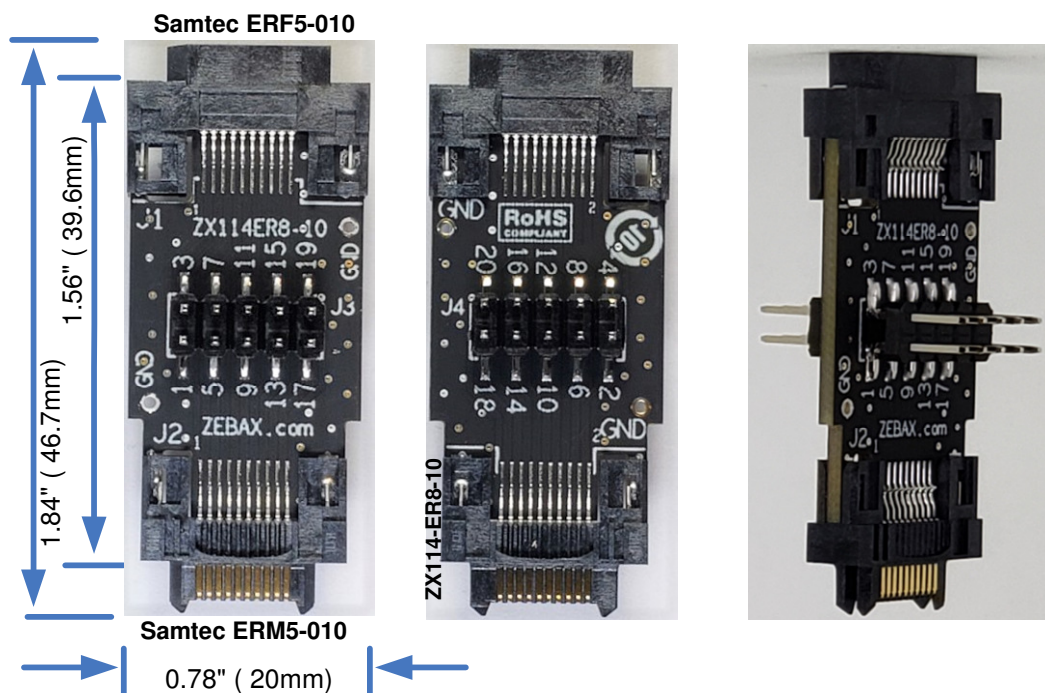
Typical Application: ZX114ER5-xxPH is designed for purpose of test and debugging at full connector's bandwidth. It provides new approach in usage of breakout adapters by :

- 1- Utilizing single or differential scope probe.
- 2- Real-Time test and measurements, ability to interface DUT with test equipment or evaluation board for validation purposes.
- 3- Interface DUT with evaluation board for validation and pre-bringup.

Scope Probe wire Installation:

- 1- In order to avoid ground loop problems, please use the shortest Ground probe wire interfacing to the nearest GND reference point. ZX114ER5xxP provides GND test point to be utilized as GND reference interface with host.

ZX114ER5-10PH – Two rows x 10 pins per row ERM5 breakout adapter , supporting ERM5-010 Samtec Edge Rate rugged connectors



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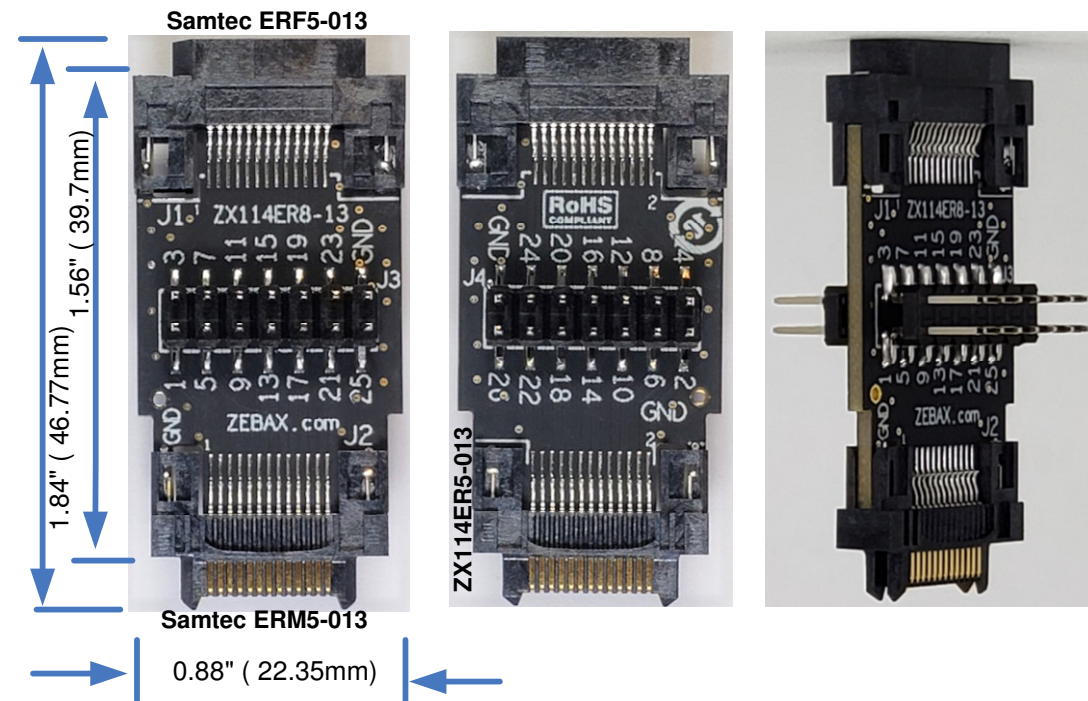
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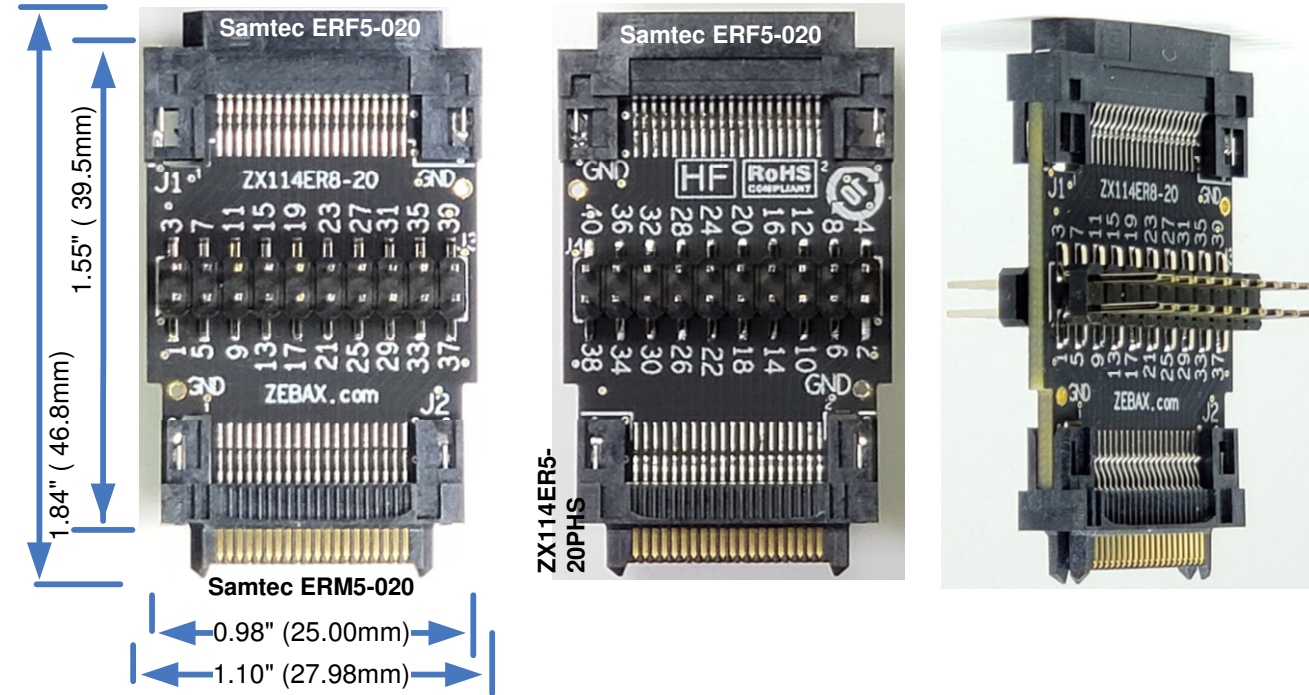
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Product Name: ZX114ER5-xxPH Samtec ERM5 Edge Rate rugged Breakout Adapter

ZX114ER5-20PHS - Two rows x 20 pins per row ERM5 breakout adapter , supporting ERM5-020 Samtec Edge Rate rugged connectors



ZX114ER5-30PH - Two rows x 30 pins per row ERM5 breakout adapter , supporting ERM5-030 Samtec Edge Rate rugged connectors



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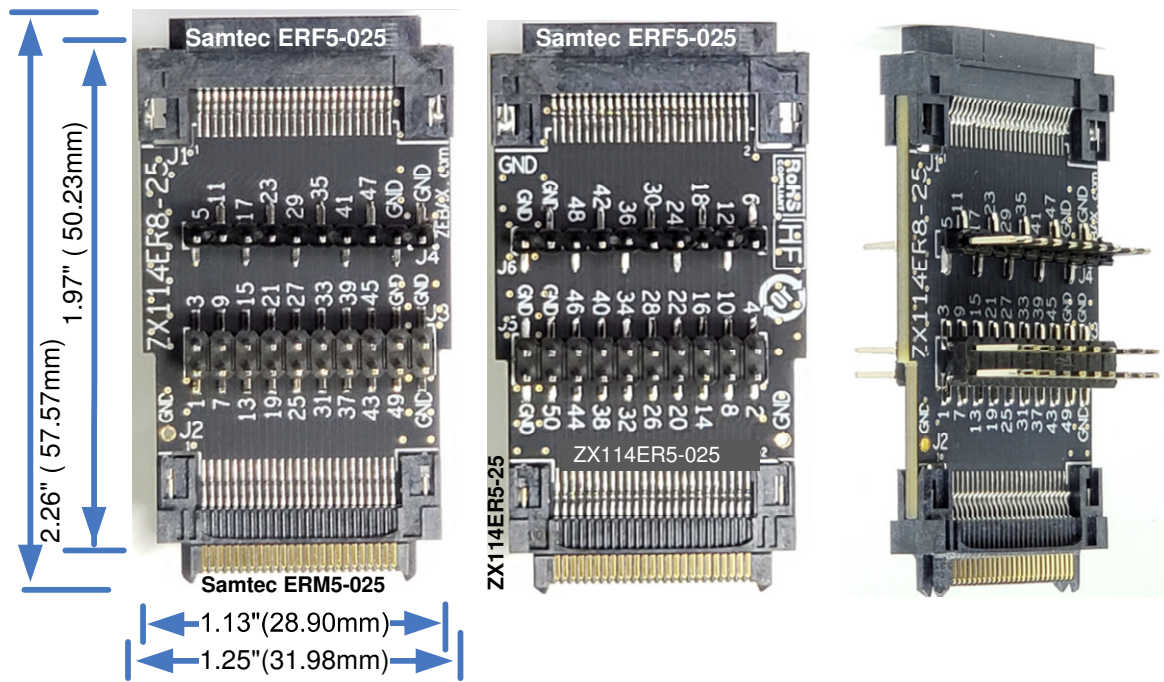
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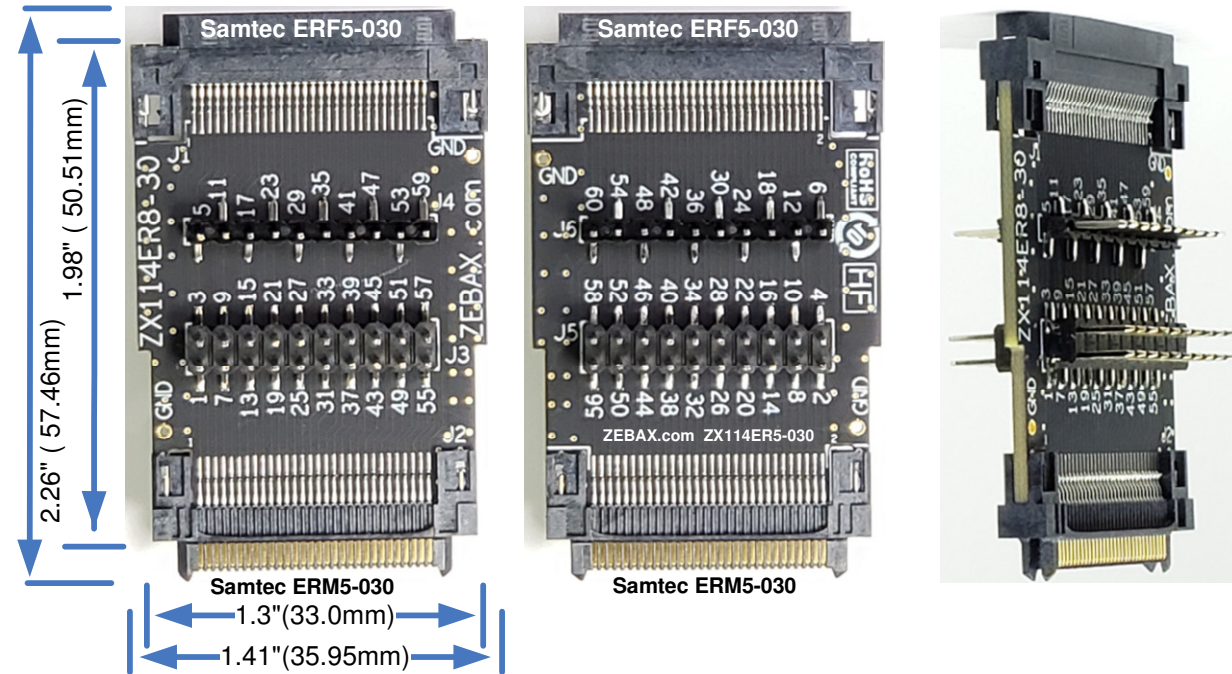
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Product Name: ZX114ER5-xxPH Samtec ERM5 Edge Rate rugged Breakout Adapter

ZX114ER5-30PH - Two rows x 30 pins per row ERM5 breakout adapter , supporting ERM5-030 Samtec Edge Rate rugged connectors



ZX114ER5-40PH - Two rows x 40 pins per row ERM5 breakout adapter , supporting ERM5-040 Samtec Edge Rate rugged connectors



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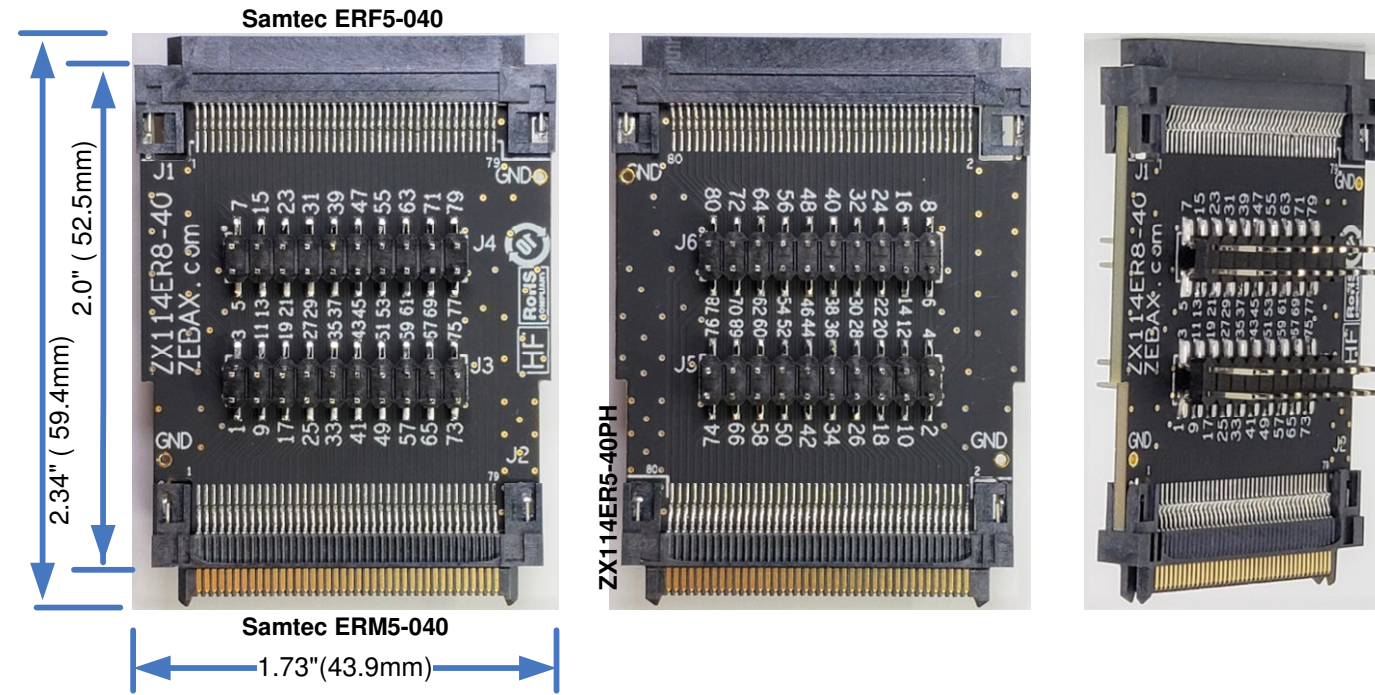
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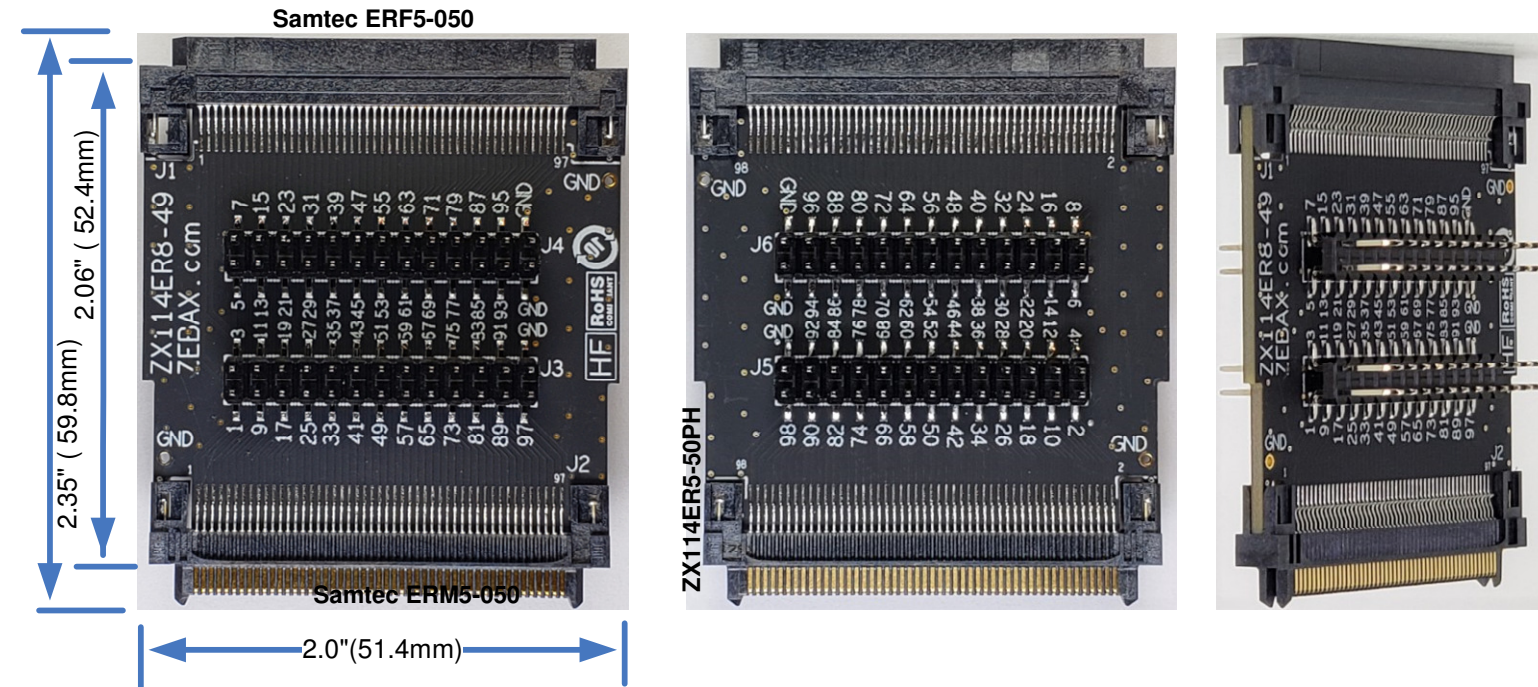
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Product Name: ZX114ER5-xxPH Samtec ERM5 Edge Rate rugged Breakout Adapter

ZX114ER5-40PH - Two rows x 40 pins per row ERM5 breakout adapter , supporting ERM5-040 Samtec Edge Rate rugged connectors



ZX114ER5-50PH - Two rows x 50 pins per row ERM5 breakout adapter , supporting ERM5-050 Samtec Edge Rate rugged connectors



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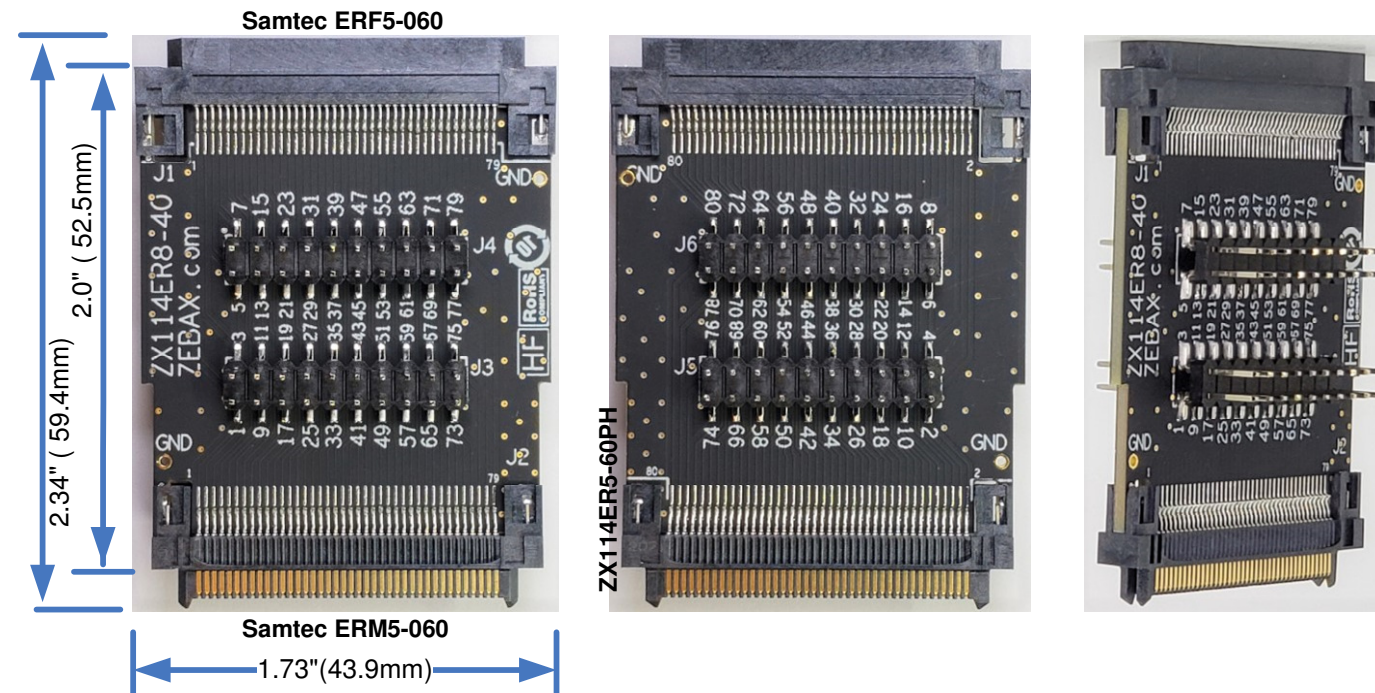
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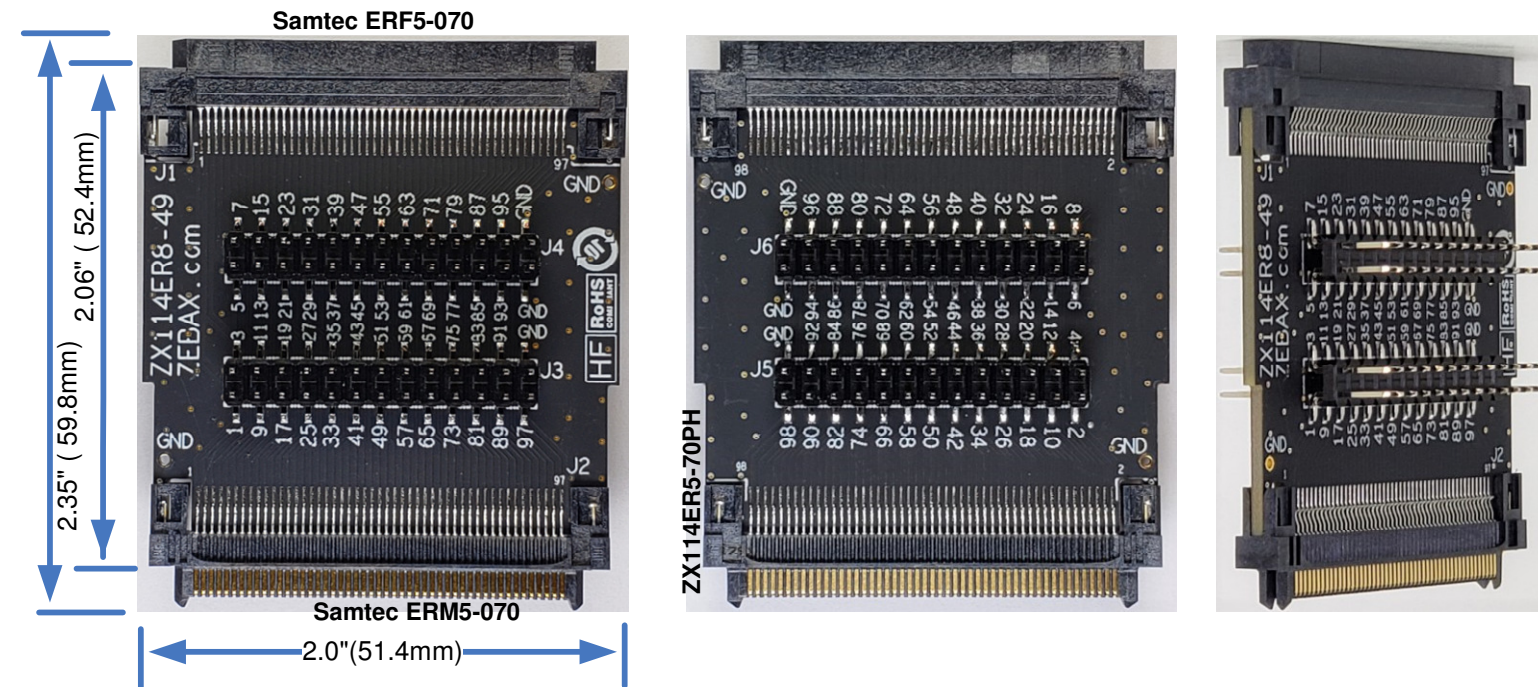
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ZX114ER5-60PH - Two rows x 60 pins per row ERM5 breakout adapter , supporting ERM5-060 Samtec Edge Rate rugged connectors



ZX114ER5-70PH - Two rows x 70 pins per row ERM5 breakout adapter , supporting ERM5-070 Samtec Edge Rate rugged connectors



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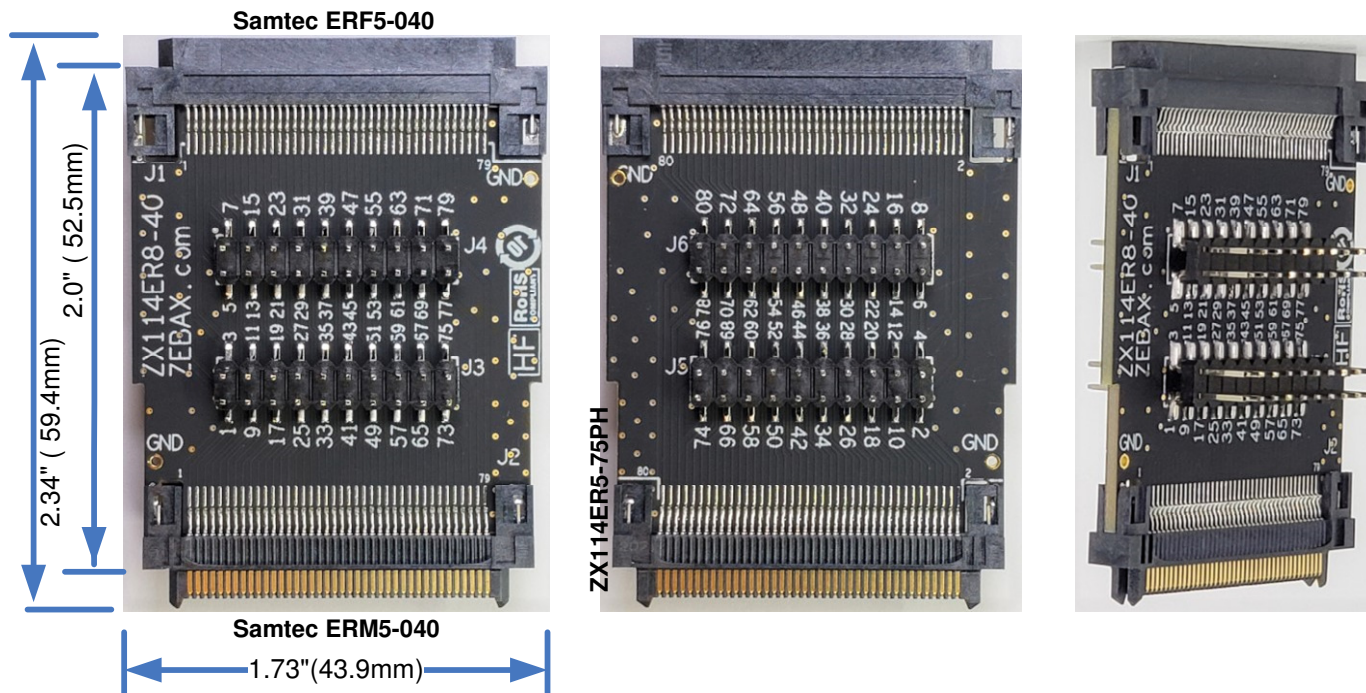
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Product Name: ZX114ER5-xxPH Samtec ERM5 Edge Rate rugged Breakout Adapter

ZX114ER5-75PH - Two rows x 75 pins per row ERM5 breakout adapter , supporting ERM5-075 Samtec Edge Rate rugged connectors



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